BATTA

Date Report Prepared: November 21, 2004
Prepared By: R. Shumate

NISTIR 5351 - Analyst Summary

	Verifying Analyst **rgs ***	Analyst #1 bl	Analyst #2 drw	Analyst #3 mq	Analyst #4 km	Analyst #5 mp **	Analyst #5 yz **
Cumulative TP/TNS (should be >0.85)		0.980	0.980	1.000	0.980	0.918	0.926
Cumulative FP/TNS (should be <0.05)		0.020	0.000	0.041	0.000	0.000	0.000
Cumulative FN/TNS (should be <0.10)		0.020	0.020	0.000	0.020	0.082	0.074

** Since RGS was verifying analyst, values will not be calculated.*

*** MP and YZ each analyzed only 2 of the four grid openings.*

Summary of Grid Openings Analyzed

Grid Opening H-2: Seven structures were verified. This opening yielded good duplication. There were no FN recorded. Only two occurrences (causing FP) were in question. Nearly one-third of the way through the opening, a matrix with a fibril of Chrysotile attached was found. The fibril protruding from the matix was <5:1 aspect and was about 4μm in length. One analyst (MQ) counted it as a matrix structure. The second occurence was similar to the first. A martix having a Chrysotile "fibril" protuding was found halfway through the opening. In this case, the fibril was protruding less than 3μm from the matrix. The aspect ratio of the protrusion was less than 3:1. One analyst (MQ) counted this as a matrix structure.

Grid Opening E-2: Fifteen structures were verified. This opening also yielded good duplication. No FP were recorded. Only one occurrence (causing FN) was in question. Near the start of the opening, a bundle (avg L: 3.5μm, W: 1.2μm) consisting of Chrysotile fibers was found. At the onset of the round, I (RGS) had originally listed the occurence as a non-structure, feeling that the overall aspect of approximately 3:1 would disqualify it. Upon closer examination, I agree that the fibers within the matrix are discernable and the aspect ratios of the individual fibers within the bundle qualify it as a bundle structure. Only one other analyst (MP) did not list the occurence as a structure. Although I listed it as a FNA (feeling that MP saw the structure as I first did), it is uncertain whether his omission should be listed as a FNA or FNB. MP also did not list TPM9, and was listed as FNB.

Grid Opening D-9: Twenty-one structures were verified. This opening also yielded good duplication. A few structures were in question, yielding FN. Near the start of the opening, along the left grid bar, a Chrysotile fiber (approximately 1.5μm long, 0.1μm wide) was found. Only one analyst (BL) did not list the occurence as a structure. Structure TPM9 is a bundle of Chrysotile (approximately 4.5μm long and 0.6μm wide). This occurence was listed as ambiguous by DRW and was not listed by KM. Structures TPM12 and TPM20 were not listed by YZ. Both of these occurences are thin, single fibrils (about 1.0μm long and 0.07μm wide) of Chrysotile and it is assumed that the analyst simply missed the fiber.

Grid Opening E-20: Six structures were verified. This opening also yielded perfect duplication. All analysts listed six Chrysotile structures on their countsheet.

Overall Notes

As can be seen above, all analysts participating had "TP/FN/FP values" within the acceptable limits listed by NVLAP and in the NISTIR-5351. In addition to these values, I statistically tracked the reproducibility of fiber-sizing. I also wanted to track the accurate classification of structures (fiber, bundle, cluster and matrix) but not all analysts indicated structure class on the countsheets.

Problems noted during the verification process: Lack of fiber classification (see note above), fiber sizing not consistently precise (significant figures), lack of sketch detail causing the verification process to be more time-consuming. It helps to include any objects close in proximity to the structure and to include the grid bar in the sketch when it is nearby. The most significant problem noted was the counter-clockwise deviation of two grid openings by two analysts. Please be sure to follow grid orientation instructions to help cut-down the time taken in the verification process. It was also noted that two of the participating analysts only analyzed two grid openings apiece. To offer the best statistical value to the round, please have all TEM analysts read all the grid openings submitted for that round. Thanks to everyone for their timely submission of results. If anyone has any questions regarding these results, please feel free to contact me by phone or e-mail.

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Sample Type: 01-1-3
Sample Archive Location: E-5
Grid Opening ID: H-2

Verified Asbestos Analysis

Analytical Values	Verifying Analyst**	Analysis 1	Analysis 2	Analysis 3	Analysis 4	Analysis 5	Analysis 6	Analysis 7	Analysis 8	Analysis 9	Analysis 10	Analysis 11	Analysis 12	Analysis 13	Analysis 14	Analysis 15	Analysis 16	Analysis 17	Analysis 18	Analysis 19	Analysis 20
Date of Analysis	07/28/04	07/28/04	08/19/04	08/20/04	08/25/04	09/20/04															
TEM Operator	**rgs**	bl	drw	mq	km	mp															
Structures Reported (SR)	7	7	7	9	7	7															
True Positives (TP)	7	7	7	7	7	7															
TPM	7	7	7	7	7	7															
TPU	0	0	0	0	0	0															
***TPV** (TP found by verifying analyst, but NOT found by any analyst)	0																				
***Total Number of Structures (TNS)** (all analysts)	7																				
***Total Number of Structures (TNS)** (one analyst)	7	7	7	7	7	7															
False Positives (FP)				2																	
False Negatives (FN)		0	0	0	0	0															
FNA																					
FNB																					
Not Located (NL)																					
Ambiguous (AMB)																					
TP/TNS		1.000	1.000	1.000	1.000	1.000															
FP/TNS		0.000	0.000	**0.286**	0.000	0.000															
FN/TNS		0.000	0.000	0.000	0.000	0.000															
[(TP/TNS) + (FN/TNS)] (must equal 1.00)		1.000	1.000	1.000	1.000	1.000															

*Value for these items will be the same for all analysts.

**Verifying analyst should not be one of the TEM Operators.

Refer to NISTIR 5351 for guidance.

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Statistical Review of Structure Assignment From Verified Asbestos Analysis

Only structures verified as "TPM" are recorded.

	Structure Length							Str Width							Structure Type							Stats for Structure Length					Stats for Structure Width					Str Type / Classification ID	
	H-2							H-2							f=1, b=2, m=3, c=4																		
Str #	rgs	bl	drw	mq	km	mp		rgs	bl	drw	mq	km	mp		rgs	bl	drw	mq	km	mp		Average	Std Dev	CV or %RSD	LCL	UCL	Average	Std Dev	CV or %RSD	LCL	UCL	Type Pass or Fail	Correct Ruling on Structure (if close to 0.5µm) Pass or Fail
1	7.50	7.55	7.50	8.00	6.50	7.00		0.250	0.250	0.500	0.500	0.400	0.400		2	2						7.3	0.52	7.08	6.320	8.363	0.38	0.11	29.36	0.1622	0.6045	Pass	Pass
2	4.00	4.00	4.00	3.00	3.80	4.20		0.250	0.200	0.350	0.250	0.250	0.380		1	1						3.8	0.43	11.15	2.994	4.673	0.28	0.07	24.74	0.1439	0.4161	Pass	Pass
3	2.70	2.75	2.50	2.50	2.50	2.50		0.050	0.050	0.100	0.050	0.050	0.030		1	1						2.6	0.12	4.55	2.345	2.805	0.06	0.02	42.64	0.0089	0.1011	Pass	Pass
4	1.50	1.75	1.30	2.00	1.50	1.60		0.080	0.090	0.100	0.100	0.100	0.100		1	1						1.6	0.24	15.03	1.133	2.083	0.10	0.01	8.81	0.0786	0.1114	Pass	Pass
5	1.80	1.90	1.50	2.00	1.50	1.70		0.060	0.060	0.100	0.100	0.100	0.050		2	2						1.7	0.21	11.92	1.327	2.139	0.08	0.02	30.66	0.0311	0.1255	Pass	Pass
6	3.20	3.25	2.75	2.50	3.00	3.00		0.070	0.080	0.100	0.100	0.080	0.100		1	1						3.0	0.28	9.59	2.394	3.506	0.09	0.01	15.05	0.0622	0.1145	Pass	Pass
7	2.80	2.90	3.00	2.50	3.20	2.60		0.060	0.050	0.050	0.050	0.050	0.050		2	1						2.8	0.26	9.11	2.326	3.341	0.05	0.00	7.90	0.0436	0.0597	Fail	Pass
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Sample Type: 01-1-3
Sample Archive Location: E-5
Grid Opening ID: E-2

Verified Asbestos Analysis

Analytical Values	Verifying Analyst**	Analysis 1	Analysis 2	Analysis 3	Analysis 4	Analysis 5	Analysis 6	Analysis 7	Analysis 8	Analysis 9	Analysis 10	Analysis 11	Analysis 12	Analysis 13	Analysis 14	Analysis 15	Analysis 16	Analysis 17	Analysis 18	Analysis 19	Analysis 20
Date of Analysis	07/28/04	07/28/04	08/19/04	08/26/04	08/25/04	09/20/04															
TEM Operator	**rgs**	bl	drw	mq	km	mp															
Structures Reported (SR)	15	15	15	15	15	15															
True Positives (TP)	15	15	15	15	15	15															
***TPM**	15	15	15	15	15	13															
TPU	0	0	0	0	0	2															
***TPV** (TP found by verifying analyst, but NOT found by any analyst)	0																				
***Total Number of Structures (TNS)** (all analysts)	15																				
***Total Number of Structures (TNS)** (one analyst)	15	15	15	15	15	15															
False Positives (FP)																					
False Negatives (FN)		0	0	0	0	2															
FNA						1															
FNB						1															
Not Located (NL)																					
Ambiguous (AMB)																					
TP/TNS		1.000	1.000	1.000	1.000	0.867															
FP/TNS		0.000	0.000	0.000	0.000	0.000															
FN/TNS		0.000	0.000	0.000	0.000	**0.133**															
[(TP/TNS) + (FN/TNS)] (must equal 1.00)		1.000	1.000	1.000	1.000	1.000															

*Value for these items will be the same for all analysts.

**Verifying analyst should not be one of the TEM Operators.

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Statistical Review of Structure Assignment From Verified Asbestos Analysis

Only structures verified as "TPM" are recorded.

	Structure Length							Str Width							Structure Type							Stats for Structure Length					Stats for Structure Width					Str Type / Classification ID	
	E-2							E-2							f=1, b=2, m=3, c=4																		
Str #	rgs	bl	drw	mq	km	mp		rgs	bl	drw	mq	km	mp		rgs	bl	drw	mq	km	mp		Average	Std Dev	CV or %RSD	LCL	UCL	Average	Std Dev	CV or %RSD	LCL	UCL	Type	Correct Ruling on Structure (if close to 0.5µm)
																																	Pass or Fail	Pass or Fail
1	5.50	5.50	5.00	5.00	5.00	5.20		0.250	0.250	0.400	0.500	0.400	0.600		2	2						5.2	0.24	4.71	4.719	5.681	0.40	0.14	34.46	0.1291	0.6709	Pass	Pass
2	1.70	2.00	1.50	2.00	1.50	1.80		0.080	0.050	0.100	0.100	0.100	0.100		1	1						1.8	0.23	12.90	1.306	2.194	0.09	0.02	23.11	0.0482	0.1284	Pass	Pass
3	3.20	3.60	4.00	3.00	3.50	3.20		0.080	0.100	0.100	0.100	0.100	0.150		1	1						3.4	0.36	10.54	2.709	4.124	0.11	0.02	22.34	0.0589	0.1511	Pass	Pass
4	5.50	5.60	5.00	5.00	4.80	5.20		0.100	0.100	0.200	0.200	0.120	0.180		1	1						5.2	0.31	6.03	4.569	5.797	0.15	0.05	32.39	0.0545	0.2455	Pass	Pass
5	2.90	3.10	2.75	2.50	2.70	2.60		0.250	0.300	0.350	0.400	0.350	0.300		2	2						2.8	0.22	7.81	2.335	3.182	0.33	0.05	16.14	0.2220	0.4280	Pass	Pass
6	1.10	1.10	1.00	1.00	1.20	1.10		0.070	0.050	0.100	0.100	0.080	0.040		1	1						1.1	0.08	6.95	0.935	1.231	0.07	0.03	34.14	0.0241	0.1225	Pass	Pass
7	5.70	6.00	5.00	6.00	5.20	5.70		0.100	0.110	0.150	0.200	0.120	0.200		2	1						5.6	0.41	7.41	4.785	6.415	0.15	0.04	30.39	0.0591	0.2343	Fail	Pass
8	7.50	7.65	6.00	7.00	7.50	7.00		0.250	0.250	0.400	0.400	0.350	0.400		2	2						7.1	0.61	8.56	5.912	8.304	0.34	0.07	21.54	0.1970	0.4863	Pass	Pass
9	3.70	3.75	4.00	3.00	3.60			0.300	0.350	0.500	0.400	0.350			2	2						3.6	0.37	10.29	2.880	4.340	0.38	0.08	19.95	0.2310	0.5290	Pass	Pass
10	3.50	3.75	3.00	3.00	3.40	3.50		0.200	0.180	0.300	0.250	0.250	0.300		2	2						3.4	0.30	8.95	2.767	3.949	0.25	0.05	20.13	0.1491	0.3443	Pass	Pass
11	5.90	6.10	5.50	6.00	5.30	6.00		0.350	0.380	0.750	0.500	0.450	0.600		2	2						5.8	0.32	5.56	5.166	6.434	0.51	0.15	29.60	0.2112	0.7988	Pass	Pass
12	1.80	2.00	1.50	2.00	1.50	1.80		0.050	0.090	0.010	0.050	0.080	0.030		1	1						1.8	0.23	12.74	1.324	2.209	0.05	0.03	57.96	-0.0072	0.1105	Pass	Pass
13	2.30	2.25	2.50	3.00	1.80	2.00		0.080	0.080	0.100	0.100	0.100	0.100		1	1						2.3	0.42	18.09	1.488	3.129	0.09	0.01	11.07	0.0730	0.1136	Pass	Pass
14	5.20	5.25	5.00	4.50	4.60	5.10		0.100	0.100	0.150	0.200	0.110	0.150		1	1						4.9	0.32	6.41	4.319	5.564	0.14	0.04	29.16	0.0576	0.2124	Pass	Pass
15	3.60	3.50	4.00	3.00	3.50			1.200	1.000	1.500	1.000	1.200										3.5	0.36	10.12	2.820	4.220	1.18	0.20	17.37	0.7773	1.5827		Pass
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BATTA

Sample Type: 01-1-3
Sample Archive Location: N-5
Grid Opening ID: D-9

Verified Asbestos Analysis

Analytical Values	Verifying Analyst**	Analysis 1	Analysis 2	Analysis 3	Analysis 4	Analysis 5	Analysis 6	Analysis 7	Analysis 8	Analysis 9	Analysis 10	Analysis 11	Analysis 12	Analysis 13	Analysis 14	Analysis 15	Analysis 16	Analysis 17	Analysis 18	Analysis 19	Analysis 20
Date of Analysis	07/28/04	07/28/04	08/25/04	08/30/04	08/11/04	09/20/04															
TEM Operator	**rgs**	bl	drw	mq	km	yz															
Structures Reported (SR)	21	22	21	21	21	21															
True Positives (TP)	21	21	21	21	21	21															
***TPM**	21	20	20	21	20	19															
TPU	0	1	1	0	1	2															
***TPV** (TP found by verifying analyst, but NOT found by any analyst)	0																				
***Total Number of Structures (TNS)** (all analysts)	21																				
***Total Number of Structures (TNS)** (one analyst)	21	21	21	21	21	21															
False Positives (FP)		1																			
False Negatives (FN)		1	1	0	1	2															
FNA			1																		
FNB		1			1	2															
Not Located (NL)																					
Ambiguous (AMB)																					
TP/TNS		0.952	0.952	1.000	0.952	0.905															
FP/TNS		0.048	0.000	0.000	0.000	0.000															
FN/TNS		0.048	0.048	0.000	0.048	0.095															
[(TP/TNS) + (FN/TNS)] (must equal 1.00)		1.000	1.000	1.000	1.000	1.000															

*Value for these items will be the same for all analysts.

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Statistical Review of Structure Assignment From Verified Asbestos Analysis

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	Structure Length							Str Width							Structure Type							Stats for Structure Length					Stats for Structure Width					Str Type / Classification ID	
	D-9							D-9							f=1, b=2, m=3, c=4																		
Str #	rgs	bl	drw	mq	km	yz		rgs	bl	drw	mq	km	yz		rgs	bl	drw	mq	km	yz		Average	Std Dev	CV or %RSD	LCL	UCL	Average	Std Dev	CV or %RSD	LCL	UCL	Type Pass or Fail	Correct Ruling on Structure (if close to 0.5µm) Pass or Fail
1	1.50		1.00	1.50	1.50	1.20		0.060		0.100	0.100	0.100	0.060		1							1.3	0.23	17.18	0.888	1.792	0.08	0.02	26.08	0.0409	0.1271	Pass	
2	0.70	0.75	0.75	0.75	0.80	0.70		0.070	0.070	0.100	0.100	0.100	0.060		1	1						0.7	0.04	5.07	0.668	0.816	0.08	0.02	22.34	0.0467	0.1199	Pass	Pass
3	1.50	1.50	1.20	1.50	1.50	1.20		0.060	0.050	0.100	0.100	0.080	0.100		1	1						1.4	0.15	11.07	1.096	1.704	0.08	0.02	27.29	0.0379	0.1255	Pass	Pass
4	3.10	3.05	2.75	2.50	3.00	3.10		0.120	0.100	0.150	0.100	0.100	0.120		1	1						2.9	0.24	8.30	2.441	3.393	0.12	0.02	17.17	0.0762	0.1538	Pass	Pass
5	10.20	10.10	10.00	8.00	8.00	8.60		0.300	0.280	0.400	0.350	0.400	0.270		2	2						9.2	1.07	11.64	7.057	11.243	0.33	0.06	17.56	0.2183	0.4484	Pass	Pass
6	2.40	2.40	2.00	2.00	2.00	2.10		0.080	0.050	0.100	0.100	0.100	0.100		1	1						2.2	0.20	9.19	1.762	2.538	0.09	0.02	23.11	0.0482	0.1284	Pass	Pass
7	8.70	8.60	7.50	9.00	8.00	7.80		0.150	0.150	0.250	0.200	0.150	0.180		2	2						8.3	0.59	7.08	7.116	9.417	0.18	0.04	22.22	0.1014	0.2586	Pass	Pass
8	1.30	1.50	1.20	1.50	1.30	1.20		0.060	0.080	0.100	0.100	0.080	0.120		1	1						1.3	0.14	10.25	1.065	1.602	0.09	0.02	23.31	0.0488	0.1312	Pass	Pass
9	4.70	4.80		4.50		4.10		0.500	0.500		1.000		0.450		2	2						4.5	0.31	6.84	3.917	5.133	0.61	0.26	42.35	0.1028	1.1222	Pass	Pass
10	5.20	5.20	4.80	4.50	4.50	4.20		0.250	0.250	0.350	0.400	0.350	0.250		2	2						4.7	0.41	8.62	3.931	5.536	0.31	0.07	21.55	0.1777	0.4389	Pass	Pass
11	2.40	2.50	2.50	2.50	2.00	2.20		0.060	0.080	0.100	0.050	0.100	0.060		1	1						2.4	0.21	8.82	1.943	2.757	0.08	0.02	28.91	0.0324	0.1176	Pass	Pass
12	1.20	1.20	1.20	1.50	1.20			0.070	0.080	0.100	0.050	0.100			1	1						1.3	0.13	10.65	0.996	1.524	0.08	0.02	26.52	0.0383	0.1217	Pass	Pass
13	5.50	5.50	5.00	5.00	5.00	5.00		0.060	0.070	0.100	0.100	0.100	0.070		1	1						5.2	0.26	5.00	4.659	5.674	0.08	0.02	22.34	0.0467	0.1199	Pass	Pass
14	1.10	1.15	1.20	1.50	1.00	1.20		0.060	0.060	0.100	0.050	0.100	0.060		1	1						1.2	0.17	14.15	0.860	1.523	0.07	0.02	31.10	0.0279	0.1155	Pass	Pass
15	5.00	5.20	5.00	4.50	4.30	4.50		1.500	1.420	1.200	1.500	1.500	0.800		2	2						4.8	0.36	7.62	4.039	5.461	1.32	0.28	21.21	0.7698	1.8702	Pass	Pass
16	4.80	3.00	4.00	4.00	4.00	4.10		0.300	0.250	0.400	0.250	0.400	0.210		2	2						4.0	0.57	14.41	2.855	5.112	0.30	0.08	26.96	0.1418	0.4615	Pass	Pass
17	7.50	7.85	6.00	7.50	6.50	6.30		0.250	0.250	0.300	0.350	0.350	0.250		2	2						6.9	0.77	11.05	5.434	8.449	0.29	0.05	16.85	0.1951	0.3883	Pass	Pass
18	1.20	1.30	1.20	1.00	1.20	1.20		0.060	0.050	0.100	0.200	0.100	0.070		1	1						1.2	0.10	8.31	0.990	1.377	0.10	0.05	56.53	-0.0107	0.2041	Pass	Pass
19	7.80	8.05	7.50	8.00	7.00	6.80		0.700	0.700	1.200	1.500	1.000	0.720		2	2						7.5	0.53	6.98	6.493	8.557	0.97	0.33	33.97	0.3224	1.6176	Pass	Pass
20	1.00	1.25	1.00	1.00	1.00			0.050	0.050	0.100	0.050	0.100			1	1						1.1	0.11	10.65	0.830	1.270	0.07	0.03	39.12	0.0162	0.1238	Pass	Pass
21	3.50	3.50	2.75	3.50	3.00	3.70		0.200	0.200	0.300	0.250	0.220	0.180		2	2						3.3	0.37	11.00	2.606	4.044	0.23	0.04	19.42	0.1391	0.3109	Pass	Pass
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BATTA

Sample Type: 01-1-3
Sample Archive Location: N-5
Grid Opening ID: E-20

Verified Asbestos Analysis

Analytical Values	Verifying Analyst**	Analysis 1	Analysis 2	Analysis 3	Analysis 4	Analysis 5	Analysis 6	Analysis 7	Analysis 8	Analysis 9	Analysis 10	Analysis 11	Analysis 12	Analysis 13	Analysis 14	Analysis 15	Analysis 16	Analysis 17	Analysis 18	Analysis 19	Analysis 20
Date of Analysis	07/28/04	07/28/04	08/25/04	08/30/04	08/11/04	09/20/04															
TEM Operator	**rgs**	bl	drw	mq	km	yz															
Structures Reported (SR)	6	6	6	6	6	6															
True Positives (TP)	6	6	6	6	6	6															
***TPM**	6	6	6	6	6	6															
TPU	0	0	0	0	0	0															
***TPV** (TP found by verifying analyst, but NOT found by any analyst)	0																				
***Total Number of Structures (TNS)** (all analysts)	6																				
***Total Number of Structures (TNS)** (one analyst)	6	6	6	6	6	6															
False Positives (FP)																					
False Negatives (FN)		0	0	0	0	0															
FNA																					
FNB																					
Not Located (NL)																					
Ambiguous (AMB)																					
TP/TNS		1.000	1.000	1.000	1.000	1.000															
FP/TNS		0.000	0.000	0.000	0.000	0.000															
FN/TNS		0.000	0.000	0.000	0.000	0.000															
[(TP/TNS) + (FN/TNS)] (must equal 1.00)		1.000	1.000	1.000	1.000	1.000															

*Value for these items will be the same for all analysts.

**Verifying analyst should not be one of the TEM Operators.

Refer to NISTIR 5351 for guidance.

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Statistical Review of Structure Assignment From Verified Asbestos Analysis

Only structures verified as "TPM" are recorded.

	Structure Length							Str Width							Structure Type							Stats for Structure Length					Stats for Structure Width					Str Type / Classification ID	
	E-20							E-20							f=1, b=2, m=3, c=4																		
Str #	rgs	bl	drw	mq	km	yz		rgs	bl	drw	mq	km	yz		rgs	bl	drw	mq	km	yz		Average	Std Dev	CV or %RSD	LCL	UCL	Average	Std Dev	CV or %RSD	LCL	UCL	Type Pass or Fail	Correct Ruling on Structure (if close to 0.5µm) Pass or Fail
1	3.10	3.10	2.75	2.50	2.50	2.90		0.080	0.080	0.100	0.100	0.100	0.100		1	1						2.8	0.27	9.71	2.272	3.344	0.09	0.01	11.07	0.0730	0.1136	Pass	Pass
2	5.30	5.40	5.00	5.00	4.70	5.00		0.150	0.150	0.300	0.200	0.200	0.180		2	2						5.1	0.25	4.94	4.575	5.559	0.20	0.06	28.16	0.0878	0.3055	Pass	Pass
3	2.10	2.10	2.00	2.00	2.00	1.60		0.050	0.070	0.100	0.050	0.080	0.070		1	1						2.0	0.19	9.47	1.601	2.333	0.07	0.02	27.11	0.0327	0.1073	Pass	Pass
4	5.20	5.30	5.00	5.00	4.90	4.70		0.120	0.150	0.250	0.150	0.150	0.130		2	2						5.0	0.21	4.26	4.597	5.437	0.16	0.05	29.47	0.0667	0.2500	Pass	Pass
5	4.70	4.70	4.50	4.00	4.00	3.70		0.100	0.090	0.200	0.100	0.110	0.120		1	1						4.3	0.42	9.91	3.436	5.097	0.12	0.04	33.75	0.0404	0.1996	Pass	Pass
6	1.10	1.05	1.00	1.00	1.00	1.00		0.050	0.050	0.100	0.050	0.100	0.060		1	1						1.0	0.04	4.08	0.943	1.107	0.07	0.02	36.34	0.0195	0.1171	Pass	Pass
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